

### Abstract

The inventive machine is used for energy engineering in the form of an engine, pump or compressor and comprises a crankcase, a cylinder provided with a piston and a stem, two crankshafts rotating in opposite directions. The internal piston cavity is connected to the though axial channel of the stem, which is arranged in the crankcase in such a way that it is reciprocatingly displaceable in a suction pipe. The channel is provided with a diffuser on the side of the cavity of the piston and with a diffuser on the end of the suction pipe. Delivery valves are mounted on the cylinder cap and suction valves are arranged on the front cylinder wall, the stem and the connecting rods of the crankshafts are pivotally connected to a beam. Said invention makes it possible to reduce the cylinder clearance and hydraulic losses.